research bulletin 27

Preserve or Perish
The Issue of Conservation:
High-rise Apartments in the City of Toronto

Robert E Millward, Acting Commissioner
City of Toronto Planning and Development Department Research and Information Section December 1986

SUMMARY

Only recently has the continued existence and proper maintenance of high-rise rental housing, which provides affordable accommodation to the majority of its occupants in the City, been seriously questioned. There is now a growing realization that the life of such housing may be seriously endangered unless appropriate action is taken to preserve it and avoid more costly solutions in the future.

Through studies already completed for the Government of Ontario, the need for and significance of high-rise apartment conservation on a province-wide basis, has already been documented.(1) A preliminary assessment of conditions in the City's St. James Town, carried out by the City's Buildings and Inspections Department between July and December, 1985, also indicated the need for substantial repairs if the buildings were to be preserved.

This bulletin highlights the issue of conservation of high-rise apartment buildings, of five or more storeys, containing more than six dwelling units, in the City of Toronto. Conservation, as distinct from regular maintenance, is defined as "long-term repairs or improvements required to preserve the life of a building".

In order to provide a better understanding of the issue, it also outlines a brief history of development of high-rise apartments, the vital role which they play as a major source of rental housing in the City, and the socio-economic characteristics of their occupants.

The bulletin also points out the need for further research and investigation of related issues before conservation policies can be developed and implemented, and outlines the City of Toronto Planning and Development Department's initiative in undertaking such an investigation, proposed to be carried out through a pilot study of the City's St. James Town.

This bulletin is a condensed version of a more detailed document entitled "High-Rise Apartments in the City of Toronto, the Issue of Conservation - A Working Paper".

High-rise Apartments Dominate the City Housing Market Since the End of the Second World War

In 1985, the City had over 88,000 apartment units in 663 high-rise buildings including about 65,000 (73%) rental units in 480 privately-owned buildings. Table 1 provides a breakdown of these buildings by ownership categories.

Table 1
Ownership of High-Rise Apartment Buildings*, City of Toronto
October 1985

Owner	No. of Buildings		No. of Units	
Private	480	(72%)	64,634	(73%)
Condominiums	76	(11%)	8,496	(10%)
Ontario Housing Corporation	41	(6%)	6,803	(8%)
Metropolitan Toronto Housing Compa ny	18	(3%)	3,109	(4%)
Cityhome	36	(5%)	2,946	(3%)
Co-operatives	10	(2%)	1,231	(1%)
Canada Mortgage and Housing Corpor ation	2	(1%)	1,123	(1%)
Total	663	(100%)	88,343	(100%)

**Buildings: Five plus storeys in height and containing more than six units*

Source: City of Toronto Planning and Development, Land Use File, 1985

Figures 1, 2 and 3 show the historical development pattern and location of apartment units in existing high-rise apartment buildings in the City of Toronto.

Figure 1 shows the development of the pre-1961 high-rise apartment buildings which represent structures from 25 to more than 65 years of age. They consist of relatively small buildings with an average of 75 units per building and account for 20% of high-rise apartments in the City. Clusters of development are centred around South Midtown, Parkdale, Regent Park (north and south), Deer Park, Annex, Davisville, Forest Hill and High Park.

Figure 1
High-rise Apartment Development
Before 1961, City of Toronto

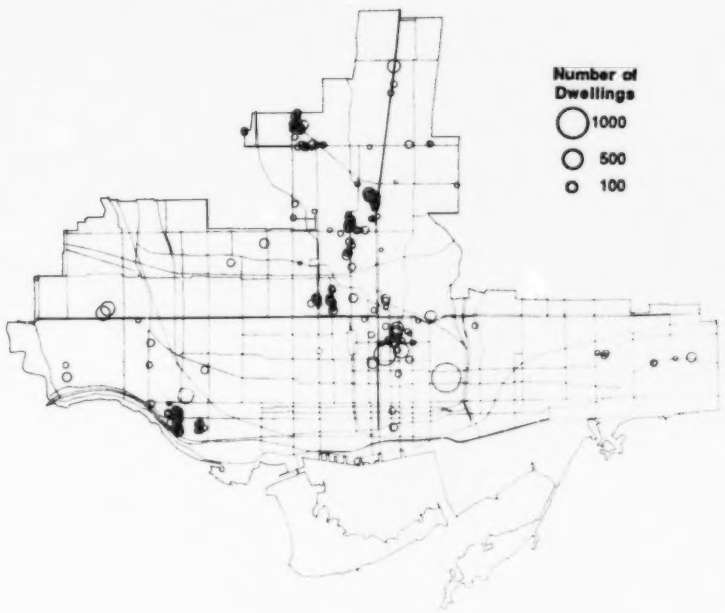


Figure 2 shows the location of the buildings, constructed between 1961 and 1975 - the period of most intensive construction of high-rise apartments in the City. They are now from 10 to 24 years old, and are, on average, twice as large as the pre-1961 buildings. They account for 54% of high-rise apartments in Toronto. During this period, construction was intensified in St. James Town, South Midtown, Yonge/Eglinton, Yonge/St. Clair, Dovercourt, Bloor Street West, Broadview/Danforth, High Park and the Harbour Area (Bay and Queen's Quay).

Figure 2
High-rise Apartment Development
1961-1975, City of Toronto

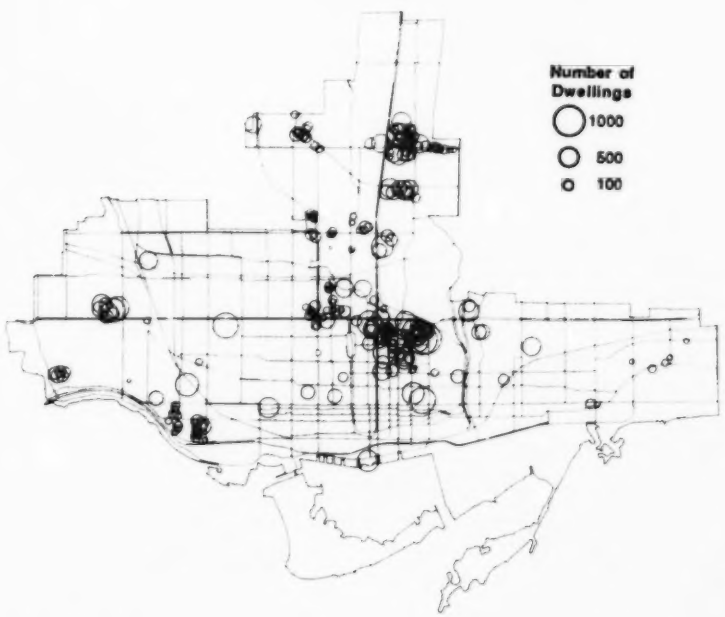


Figure 3
High-rise Apartment Development
Since 1976, City of Toronto

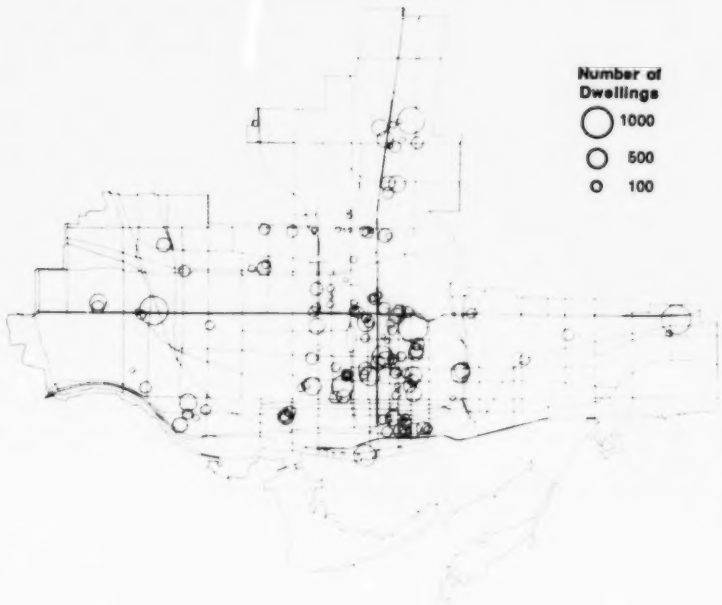
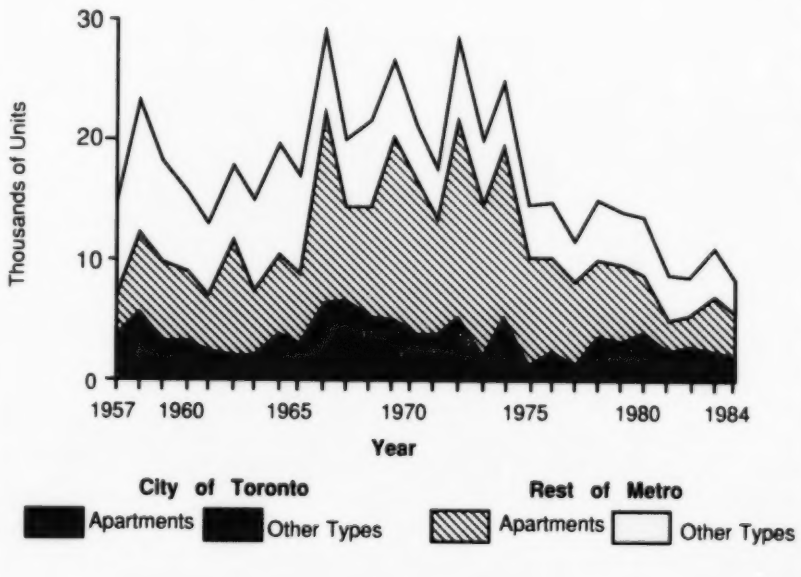


Figure 3 illustrates the development of the post-1975 buildings which are generally smaller than those constructed in the preceding period. They account for 26% of high-rise apartments in the City. The period is characteristed by the operation of rent control, the acceptance of condominium as a form of ownership and construction of high-rise luxury condominiums in certain prime locations. With the passing of the Central Area By-law, the period also witnessed the acceptance of the concept of mixed residential/commercial buildings within the Central Core.

Figure 4
Year to Year New Housing Completions,
City and Rest of Metropolitan Toronto, 1957-1984



Source: C.M.H.C.

Figure 4 shows that between 1957 and 1984, about 313,000 new apartment units, mostly in high-rise buildings, were built in Metropolitan Toronto. The City of Toronto's share was about 90,000 or 29% of the Metro total.

Apartment units built during that period accounted for 92% or nine out of every ten new dwellings, constructed in the City.

The most significant period of development was between 1961 and 1975, when 54% of all units in the existing high-rise buildings were built. However, since 1975, the construction of new rental apartments has occurred at a diminishing rate, mainly because of declining attraction of rental housing as a means of investment by developers. Several factors contributed to this, including high project costs, high interest rates, rent control and termination of the federal assisted rental programme which had subsidized private rental construction.

Socio-Economic Forces Make Apartments Dominant Source of Rental Housing

A number of demographic, socio-economic and other forces in the past 30 years have influenced the composition of housing supply in the City. The most significant factor was the continuing trend towards smaller households.

This is illustrated by Figure 5 which shows that the average household size dropped from 4.3 persons per household in 1951 to 2.5 persons in 1981. The Metropolitan Toronto Planning Department estimates that household size will likely drop to less than two persons by the year 2011. However, the trend may be interrupted if there is a serious shortage of affordable housing in the City and people begin doubling up or sharing accommodation with relatives or friends.

Smaller households have resulted largely from the splitting up of traditional families and extended households into single person and non-family (unrelated person) households. This in turn resulted in an ever growing demand for additional housing, despite very little or no increase in the City's population.

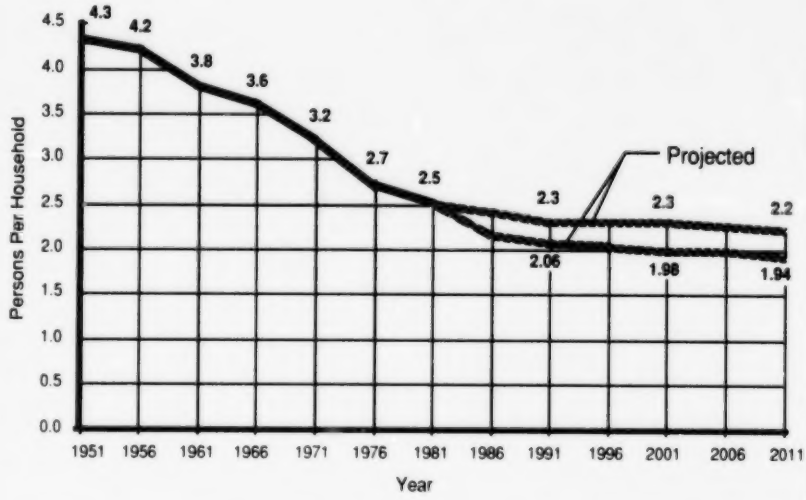
Figure 6 shows that the overall ratio of non-family households in the City rose from 13% in 1951 to 46% in 1981. But the ratio of non-family households living in high-rise apartments in 1981 was even substantially higher (72%) as illustrated by Figure 8.

A Preserve or Perish Question

Though the title of this bulletin may sound somewhat dramatic, conservation of high-rise apartments in Toronto deserves more serious consideration by the City and senior levels of government in the context provided by the working paper and this bulletin.

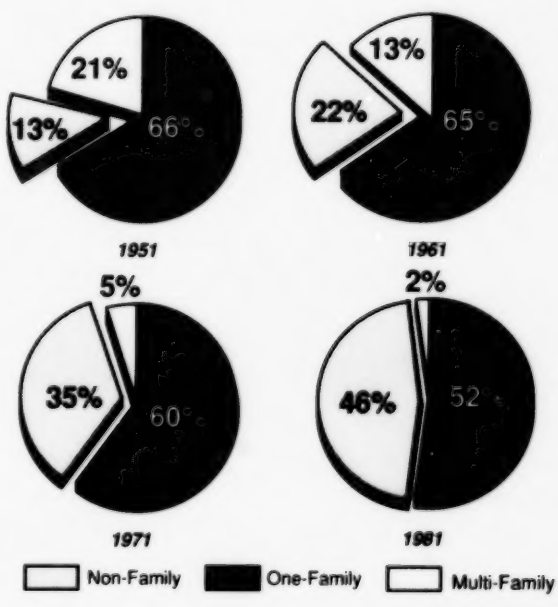
Of the City's stock of 241,000 dwellings in 1981, high-rise apartment buildings accounted for 78,000 units or one-third of the total stock. Of the City's 143,000 rental units in 1981, apartments in high-rise buildings represented over 75,000 units or more than one-half of all rental dwellings. Furthermore, preservation is necessary because of limited prospects for construction of new rental housing that will be affordable to the majority of tenants.

Figure 5
City of Toronto, Declining Average Household Size (Persons Per Household)



Source: Census of Canada and Preliminary Projection by Metro Planning Dept., 1985

Figure 6
City of Toronto, Changes in Proportion of Family and Non-Family Households, 1951-1981



Source: Census of Canada

Low and Moderate Income Tenants Will Suffer Most

If the existing apartments are allowed to deteriorate or perish, low and moderate income, single person and non-family households who account for most of the high-rise tenants, are likely to be the most disadvantaged. The following data and graphs illustrate the socio-economic characteristics of high-rise apartment tenants, based on the 1981 Census of Canada.

Home Mostly To Low Income Tenants (2)

Figure 7 shows that in 1980, a majority of tenants in high-rise apartment buildings in the City were accounted for by low and moderate-income individuals or households. The average household income of high-rise apartment tenants was $18,981. Cumulatively, close to two-thirds of the tenants had annual household incomes of less than $20,000, including 50% with incomes below $15,000, 31% with incomes below $10,000 and 12% with income less than $5,000.

Non-Family Households Predominate

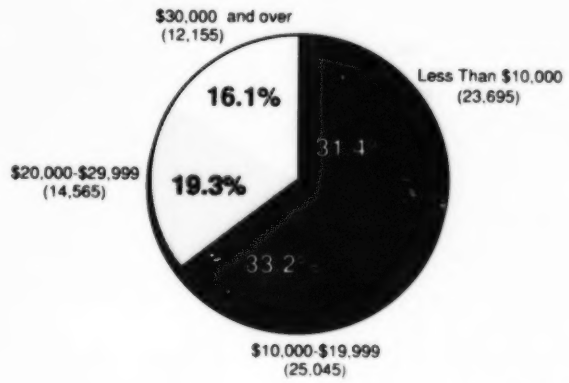
Figure 8 presents an analysis of high-rise tenants by type of household. It shows that high-rise apartments are home mostly to one-family (without children), non-family and lone-parent households. Non-family households, consisting of one or more unrelated persons, accounted for 72% of the tenants, followed by couples without children (16%), couples with children (7%) and lone-parent families with children (5%). Multi-family households were almost non existent.

Figure 9, which analyzes the non-family category by income group, highlights the fact that most of the non-family households (72%) had annual household incomes below $20,000, including 13% with incomes below $5,000, 23% with incomes between $5,000 and $9,999 and 36% with incomes from $10,000 to $19,999.

Affordability Problem for Many Low Tenants Mostly Younger Persons and Senior Citizens

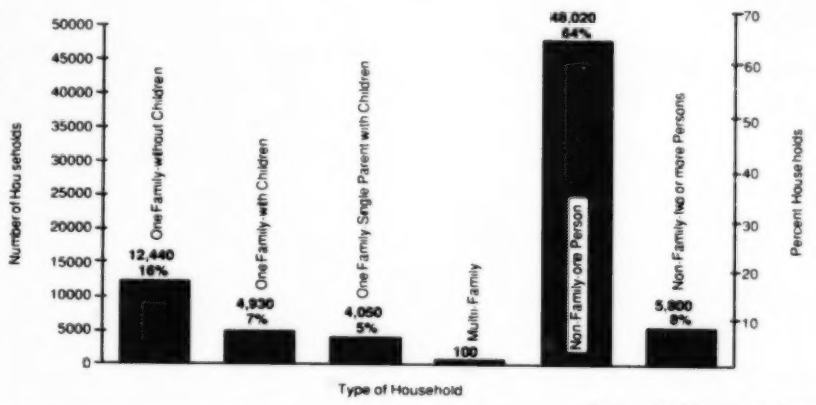
Compared with the City as a whole in terms of the age of the household heads, high-rise apartments had a higher ratio of younger and older persons and a lower

Figure 7
City of Toronto, High-Rise Households By 1980 Household Income



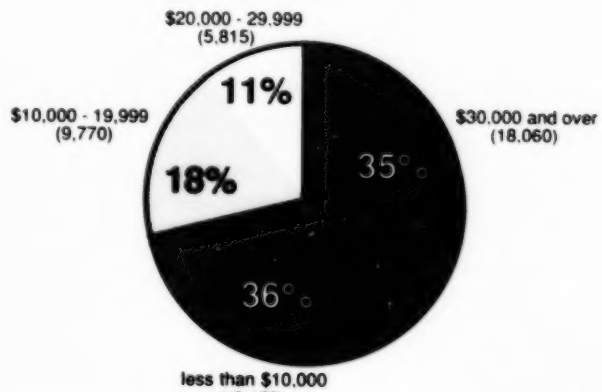
Source: 1981 Census of Canada

Figure 8
City of Toronto, High-Rise Households By Type of Household, 1981



Source: 1981 Census of Canada

Figure 9
City of Toronto, High-Rise Non-Family Households in 1981 by 1980 Income



Source: 1981 Census of Canada

ratio of persons between the ages of 35 and 64 years.

Figure 10 presents the distribution of household heads by age and household income. It shows, younger persons (under 35 years) and senior citizens (65 years and older) together accounted for nearly two-thirds of household heads in the City.

The analysis demonstrates, that well over half of the senior citizens were living on marginal incomes (less than $10,000). The figure shows close to 60% of the senior citizen heads, had incomes of less than $10,000. Compared with senior citizens, about a quarter of younger household heads had incomes of less than $10,000.

The non-family (one or more unattached persons households) (Figure 8) claimed the largest share of senior citizen heads, i.e. 80% of the heads aged 65 years or more, followed by 71% of the heads below 35 years of age and 66% of the heads aged between 35 and 64 years.

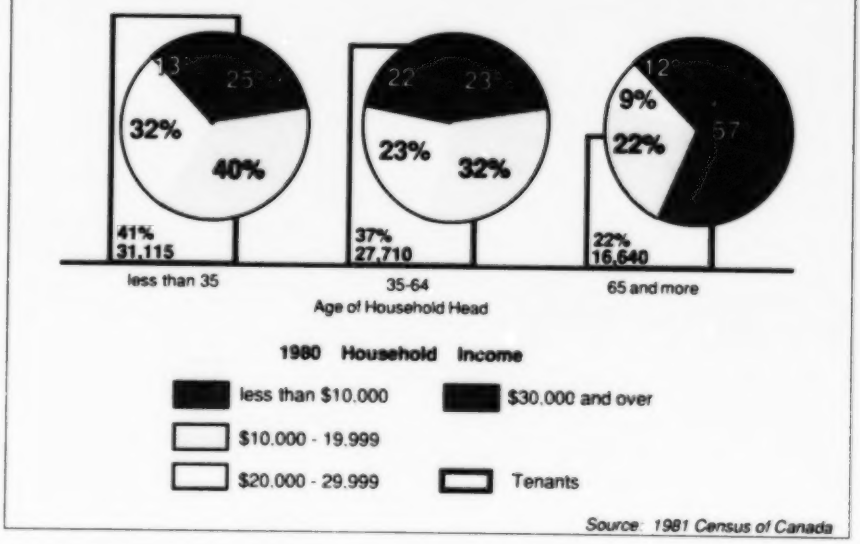
Affordability Problem for Many Low Income Tenants

High-rise apartments provide affordable housing to the majority of their occupants. Figure 11 shows that in 1981, 27% of the high-rise tenants paid monthly rents of less than $250, including 17% who paid less than $200, and that another 43% paid from $250 to $349. As a result, close to three-quarters of the tenants paid less than $350 per month while only 30% paid $350 or more.

Further analysis of rents paid in relation to income shows that, in the majority of cases, low rents matched low incomes. For example, 92% of the 13,250 tenants who paid less than $200 per month on rent were accounted for by tenants who had annual household incomes below $15,000 including 35% with incomes below $5,000, 47% with incomes between $5,000 and $9,999 and 10% with incomes between $10,000 and $14,999.

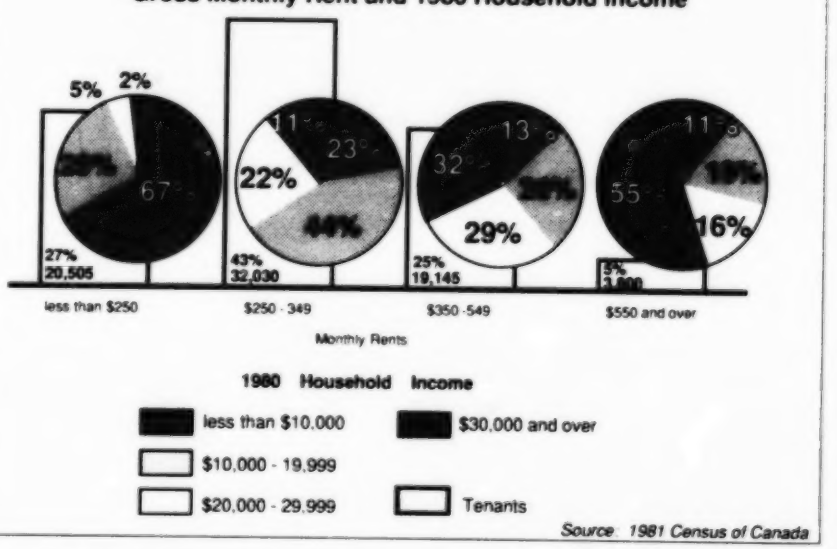
The significant number of low income (below $10,000) tenants and low rent (below $250 per month) units in high-rise apartments reflects the existence of assisted units owned by public and private non-profit authorities and housing co-operatives. In 1985 such housing accounted for 17% of high-rise units in the City (Table 1).

Figure 10
City of Toronto, High-Rise Tenants by Age of Household Head in 1981 and 1980 Household Income



Source: 1981 Census of Canada

Figure 11
City of Toronto, High-Rise Tenants by 1981 Gross Monthly Rent and 1980 Household Income



Source: 1981 Census of Canada

Figure 11 shows that more than two-thirds of the tenants who paid less than $250 per month had incomes below $10,000. Conversely the majority (55%) of the 3,800 who paid the highest rent of $550 or more per month, also belonged to the higher income groups of $30,000 or more.

However, Figure 11 also indicates that a significant proportion of high-rent units, in the monthly range of $350 or more, were occupied by low income tenants. The two pie charts in Figure 11 on the right-hand side show that low income tenants (with 1980 household incomes of less than $20,000) accounted for about 13,000 or 40% of the occupants of the $350-$549 rental range units and for about 1,100 or 29% of the occupants of $550 (or more) rental range units. Under the guideline of the 25% rent-to income ratio, apartments in the rental ranges in question would require annual tenant incomes of between $17,000 and

$27,000. It means that, because of their low incomes, the rent-to-household-income ratio for the tenants in question ranged from a low of 22-33% to a high of 42-66%. This is indicative of a serious situation where, due to a lack of available affordable housing in the City, many low-income tenants were forced into renting high-priced housing which they could ill afford.

Two-Thirds of Tenants Paid Less Than 25% of Income on Rents

Figure 12 shows that in 1981 the majority of high-rise tenants paid affordable rents relative to their household incomes. It shows nearly two-thirds (62%) of the tenants paid less than 25% of their gross household income on rent.

It is equally significant, to note that, although a minority, a significant number (i.e. 28,570) or close to two-fifths (38%) of the high-rise tenants had rent-to-income ratios of 25% or more and that 20,720 or 28% of the tenants had to spend 30% or more of their household income on rent. Accordingly at least one-third of high-rise tenants had affordability problems in 1981. The affordability problem of low income tenants is highlighted by analyzing the 1981 rent-to-income ratio by each income group. The two pie graphs on the right-hand side of Figure 12 show that one-third of the tenants whose rent-to-income ratio was between 30% and 35% and four-fifths (80%) of those who paid 35% or more of their income on rent, fell into the less than $10,000 income group.

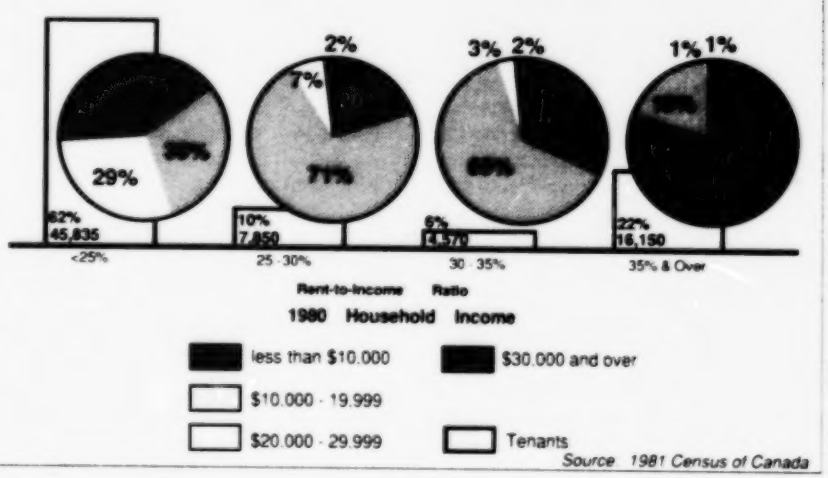
Seventy per cent of those with rent-to-income ratios of 30% or more, had incomes of less than $10,000 and 97% of them had incomes below $20,000. Higher income groups accounted for a very small minority of the tenants (about 3%) who paid 30% or more.

Affordability would actually be a more serious problem in privately owned buildings than indicated by the overall figures if rent-geared-to-income units and other forms of assisted units were excluded from the analysis.

The problem has probably become even more serious since 1981. Between 1981 and 1985, while the average earnings increased by about 20%, the average rents for apartments increased faster, with increases ranging from 30% for bachelor units, 31% for one-bedroom units, 33% for two-bedroom units to 46% for three-bedroom units. In 1985 the combined waiting list at the various housing authorities for assisted units within the City of Toronto consisted of 9,000 applicants of which 6,400 were accounted for by Cityhome, the City's Non-Profit Housing Corporation.

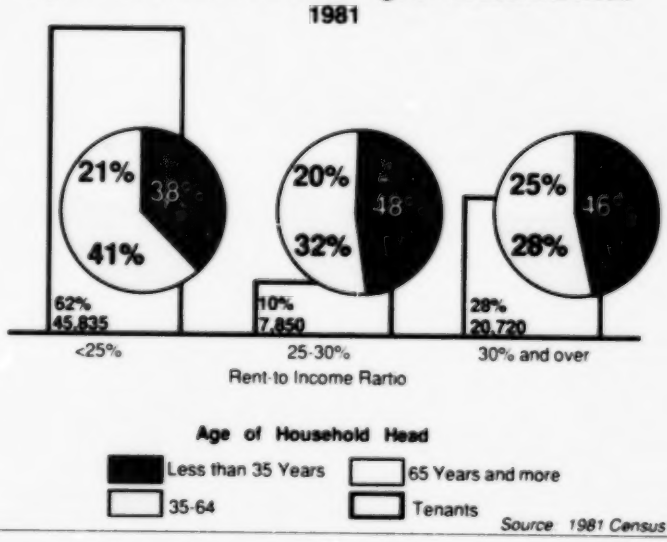
Despite any prospective costs of conservation, rents in the rehabilitated buildings will still remain much lower than in new buildings, if such buildings were constructed to replace existing ones. However, it must be pointed out that conservation costs reflected in future rent increases in existing buildings could further aggravate the affordability problem for many low and moderate-income tenants. The problem could be minimized by government intervention. In order to encourage conservation and at the same time maintain the affordability of rehabilitated units, the government could provide incentives in the form of direct per unit rehabilitation subsidies, insured mortgages, and tax concessions to the building owners.

Figure 12
City of Toronto High-Rise Tenants
By Rent-to-Income Ratio
Based on 1981 Rent and 1980 Household Income



Source 1981 Census of Canada

Figure 13
City of Toronto, High-Rise Tenants
By Rent-to-Income Ratio and Age of Household Head
1981



Source 1981 Census of Canada

Figure13, on page 7, illustrates the relationship of rent-to-income ratio with the age of household head. It shows that in 1981, of the 20,720 tenants with rent-to-income ratios of 30% or more, 46% were younger than 35 years of age, 29% were between the ages of 35 and 64 years and 25% were senior citizens aged 65 years or more. The ratios would not be significantly different if the two groups, whose rent-to-income ratios were 25-30% and 30% or more respectively, were combined into a single group of 28,750 tenants who paid 25% or more of their income on rent.

Figure 13 shows the younger the household head the higher the rent-to-income ratio. The reason for this can be largely explained by the fact that, of the 31,115 household heads below the age of 35 years, a large majority, i.e. 22,200 or 71%, represented single unattached persons. As the majority of young singles (unless in the disabled category) are not eligible for assisted housing, they are forced into a situation of paying higher rents in private buildings which they may not be able to afford.

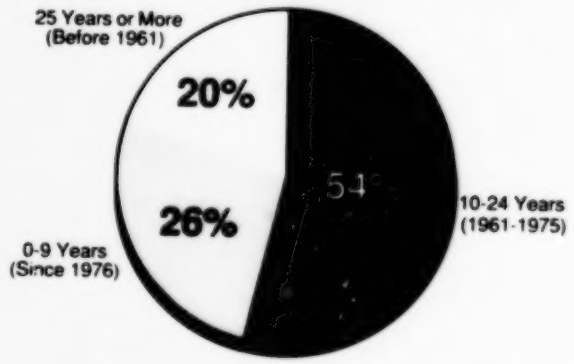
Dwellings Built Since 1976 Accommodated Higher Ratios of Low Income Tenants

Although units built since 1976 accounted for only 13% of tenant-occupied units according to the 1981 Census, they accounted for higher ratios of low income tenants and low rent units. This is explained by construction and acquisition, after 1975, of substantial amounts of assisted housing by government and private non-profit housing authorities and co-operatives. The analysis indicates that tenants with household incomes below $5,000 accounted for 18% of the units built since 1976, compared with 9% of those built before 1961 and 11% of those built between 1961 and 1975. Tenants with incomes between $5,000 and $10,000 accounted for 25% of units built since 1976 compared with 19% of those built before 1961 and between 1961 and 1975.

Units with rents below $200 per month accounted for 28% of the units built since 1976. Cumulatively, units renting for less than $250 per month in 1981 accounted for 34% of the rental units built since 1976.

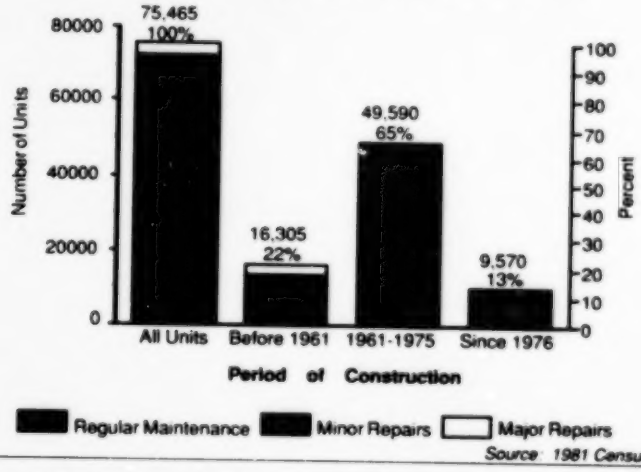
Aging and Lack of Concern for Preservation Threaten Apartment Stock

Figure 14
Dwelling Units in High-Rise Apartment Buildings By Period of Construction[3]



Source: City of Toronto Planning and Development Department, Land Use File, 1985

Figure 15
City of Toronto, Tenant-Occupied Dwelling Units in High-Rise Apartment Buildings by Period of Construction [3] and Need for Repairs, 1981



Source: 1981 Census of Canada

The existence of high-rise apartment buildings might now be threatened because of the process of aging and lack of preventative maintenance. Problems have surfaced which were not foreseen at the time of construction, since high-rise residential buildings in Toronto were then a relatively new phenomenon. Within the next 20-25 years, as the buildings age, almost all of the existing buildings in the City, including those built more recently, will require extensive repairs.

The existing high-rise apartment buildings in the City, range from those built recently to more than 65 years ago. Fifty four percent of the units are accounted for by buildings 10-24 years old and 20 percent by buildings from 25 to 65 years or older. The remainder are less than ten years old (Figure 14).

Though there are limitations as to the value of building condition data on apartments provided bythe1981Census, the Census nevertheless, did indicate that 16% of rental high-rise apartment units in the City of Toronto were in need of either minor or major repairs. The ratio was 25% for older structures built before 1961 (Figure 15).

Data on the age of high-rise apartment buildings, along with general assessment of problems and conditions (such as that provided by the provincial consultants or the City's Buildings and Inspections Department) are a more reliable source of

information than the 1981 Census. The Census data reflect the respondents' subjective perception of the need for repairs of their own dwellings rather than the overall condition of a building. Nevertheless, they are useful for comparative analysis.(4)

Deterioration of high-rise apartments, if not checked, will not only create a very serious housing crisis, it might also result in the lowering of assessed value of apartment buildings, eroding a very significant source of municipal revenue and consequently lowering the standard of municipal services in the City.

Provincial consultants listed the repairs and improvements required in high-rise buildings under seven major categories namely:

- Weather Protection,
- Structural Integrity,
- Building System,
- Parking Structures,
- Occupant Safety,
- Movement System, and
- Equipment and Fittings.

The need for substantial repairs of a mechanical and structural nature was also confirmed through a recent preliminary assessment of conditions in 15 high-rise buildings in Toronto's St. James Town neighbourhood.

Conservation - The Most Economic Solution

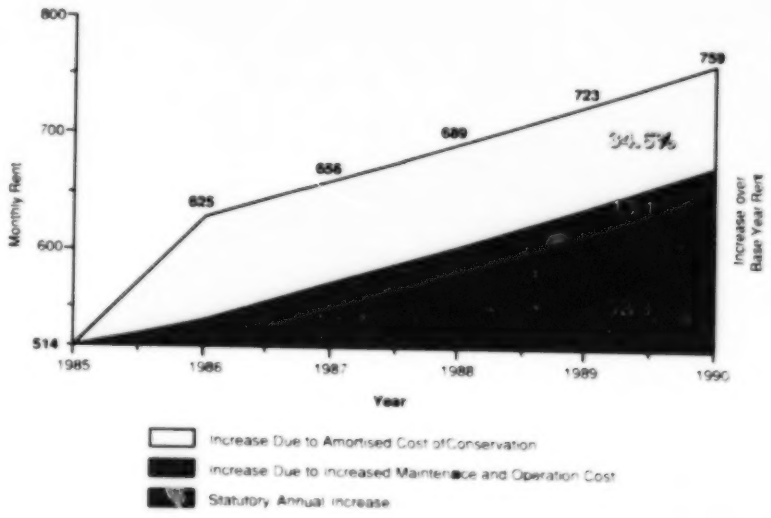
The cost of conservation and its impact on future rents will vary from building to building, depending on the quality of initial construction and subsequent maintenance, the age and physical condition of the building, the need for upgrading to standards, the cost of repairs and cost of financing.

A detailed analysis and the estimate of major costs was prepared by the consultants to the Province based on case studies of five high-rise apartment buildings in Ontario, (including two in Toronto) plus a hypothetical building.

The studies included a cross-section of buildings in terms of tenure (private, private non-profit and public), number of storeys, period of construction, number of units and estimated cost of conservation per unit. All the buildings had underground parking garages.

Compared with the average cost of construction of $53,000 per unit for a new building for non-profit housing, conservation is estimated to cost significantly less, i.e. between $8,000 and $16,000 per unit. According to the opinion of provincial consultants conservation of about 334,000 rental high-rise apartments in Ontario could cost up to $6 billion. Though conservation may, in due course, cost hundreds of millions of dollars, it still appears to be the most economic method of maintaining the existing supply of affordable rental housing.

Figure 16
Possible Effect of Statutory and Pass-Through Increases On the Rent of a Two Bedroom Apartment in Toronto



Post Conservation Rents Will Be Lower and More Affordable Than Rents In New Buildings

The cost of conservation of existing buildings will be several times lower than the cost of replacing them by new ones, despite rent increases that may be required to offset the amortized costs of rehabilitation. Post-conservation rents in existing buildings will most likely still be substantially lower and more affordable, than rents in new buildings. As stated before, any rent increases due to conservation may be eliminated or reduced by government providing rehabilitation subsidies and other incentives to the building owners.

The rent control process permits:

- Statutory and automatic annual increases in rent, (linked to but not necessarily corresponding with the rate of inflation), if tenants do not object.
- Increases due to increased maintenance and operating costs, which, if approved through the review process, can be passed on to the tenants.
- Increases due to amortized costs of conservation or renovation which, subject to review, can also be passed on to the tenants in the form of rent increase.

The possible combined effect of increases, including the increases required to offset the amortized costs of conservation, on the rent of a two-bedroom unit, in a hypothetical rent-controlled high-rise apartment building in Toronto was analyzed by the City Planning and Development Department.

The analysis was based on the following assumptions:

- Rent controlled building with a proven need for conservation.
- Current average rent - $514 (as per CMHC, April 1985 survey).
- Total conservation - cost $16,000 per unit to be incurred in two stages.
- Initial cost - $8,000 or 50% of the total, the remaining to be incurred at the beginning of the next five year period.
- Amortization period - 20 years.
- Average amortized cost per unit - $85 per month or 16% over base year rent of $514, for the duration of the

amortization period.

The analysis also assumed that the rate of statutory increase will remain constant at 4% maximum for five years and that, with significant work accomplished in 1986, the rate of increase on account of regular maintenance and operations, will remain constant at 1%.

Figure 16 illustrates that stage one of conservation will cause the rent to rise from $514 to $599 per month, by $85 or 17%. The figure shows that while the $85 increase on account of conservation will remain constant, the two other combined increases beginning at $26 or 5% in the first year, would rise cumulatively in five years, to $160 per month or 30% over the base rent of $514.

The analysis is limited to the first five years (or stage 1) of the 20 year program. Beyond the first stage, the cumulative effect of increases will be naturally greater when the amortized costs of conservation to be undertaken in the second stage are added.

Though conservation might widen the affordability gap for some low and moderate income tenants, thereby increasing the demand for housing assistance in one form or another, it will still keep the rents within affordable limits for most renters.

Further Research Required - The St. James Town Pilot Study

Although the need for and significance of conservation has been documented by the studies conducted for the Government of Ontario, further research is required before any policies, plans, programs and strategies can be formulated for implementing conservation in the City of Toronto.

One of the most important issues, is the issue of landlords' and developers' reluctance to invest in new rental housing construction and conservation of existing stock.

Closely linked to the issue of investment was the issue of rent review. The rent review process, with a combination of other reasons, mainly high cost of financing, tended to discourage landlords from investing in long-term conservation measures. However, the situation is likely to improve as a result of significant changes in the rent review process, recently introduced by the Government of Ontario. The changes, proposed by a government appointed joint committee of representatives of tenant and landlord groups, are expected to make the review process more acceptable to both the groups. While safeguarding the interest of the tenants, the changes are expected to assure the landlords of recovering their legitimate costs and of a reasonable return on their investment.

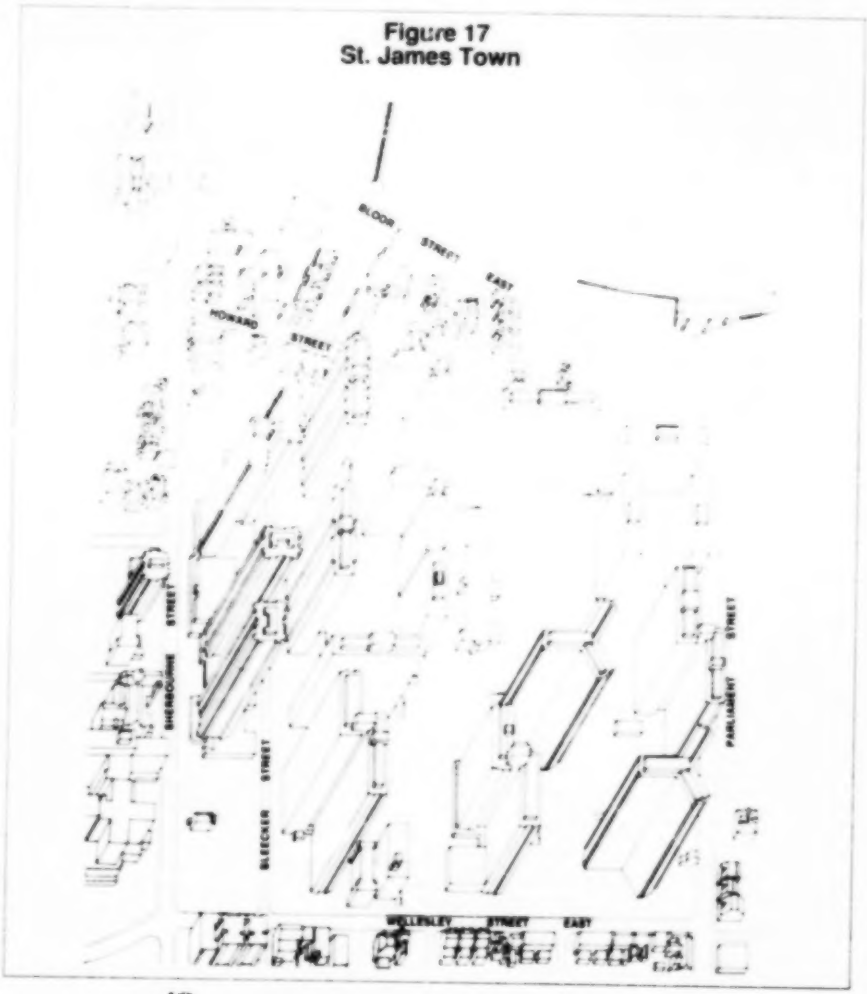
The estimated costs of conservation stated by the provincial consultants are useful to the extent of conveying only an initial sense of magnitude of costs that may be involved. Before repairs can be planned, more accurate estimates will be required, involving assessment of physical condition of buildings through intensive inspections and technical surveys. The responsibilities and roles of building owners and various levels of government and financial institutions, pertaining to various aspects of the conservation effort, eg., financing, management and temporary housing of tenants during renovation, etc. must also be determined.

The City of Toronto Planning and Development Department proposes to research the various aspects of the conservation issue, through a pilot study based on St. James Town. Figure 17 shows the location of the neighbourhood.

St. James Town is a neighbourhood of over 6,000 high-rise apartment units in Toronto which symbolizes the nature of problems that may be encountered in many other high-rise buildings throughout the City. Of particular concern are the 5,896 units in the original development, between Bleecker and Parliament Streets. The study is proposed to be conducted with the financial assistance and co-operation of the building owners, the Government of Ontario, and the Canada Mortgage and Housing Corporation.

The main objective of the pilot study, is to determine the future direction of policies

Figure 17
St. James Town



and programs for conservation, based on further investigation of significant issues such as:

- assessment of building conditions, conservation requirements and their costs;
- the management of conservation projects including temporary housing of tenants during renovation;
- assessment of possible tenure alternatives;
- cost of financing and its effect on affordability;
- investment in conservation; and
- the role of building owners, tenants, lending institutions and various levels of government relative to various facets of conservation.

Although St. James Town, in many ways provides tangible evidence of the kind of problems that may be encountered in high-rise apartment buildings in the City, the results of the proposed study will hopefully have universal application in Canada.

The stock of existing high-rise apartments represents the most significant source of affordable rental housing in the City of Toronto. Because of aging of buildings and lack of preventative maintenance, their life might be seriously threatened if no action is taken now to prevent further deterioration. The proposed St. James Town study represents the City's initial step in its efforts towards high-rise apartment preservation and an attempt to avoid more costly solutions in the future.

REFERENCES

(1) Klein and Sears, et al. **Study of Residential Intensification and Rental Housing Conservation**. 11 volumes, prepared for the Ontario Ministry of Municipal Affairs and Housing and the Association of Municipalities of Ontario, March 1983.

(2) The analysis of socio-economic conditions, etc. is based on the 1981 Census of Canada. The Census data on such items were based on a 20% random sample weighted to provide estimates of the entire "population", which in this case would be the 75,000 (or thereabouts) rental high-rise apartment units in Toronto. Because of a particular policy of rounding followed by Statistics Canada, the set of numbers which appear in this Bulletin in one graph may not necessarily agree exactly with those in another graph. It is also important to note that the Census data related various (other) 1981 variables to the 1980 household income.

(3) Although one might have a tendency to compare the two graphs, Figure 14 and 15 are not comparable since they refer to different years and are derived from two different sources.

(4) On the subject of conservation including the nature of repairs and costs and their effect on rents, etc., the working paper cited in this Bulletin draws substantially from Klein and Sears, et al. **Study of Residential Intensificationand Rental Housing Conservation, Volume10**.

It should be pointed out that building conditions which need to be remedied in order to prolong the useful life of high-rise apartment buildings, can be of such a nature that they are not adequately reflected in the result of surveys carried out by the Ministry of Municipal Affairs and Housing or the housing conditions survey carried out under the 1981 Census of Canada. The Census data on housing (based on a 20% sample), reflected mostly the subjective judgement and perception of the respondents about their own particular units, whereas the consultants for Residential Intensification and Conservation Study determined the conditions as they affected the building as a whole, through detailed professional inspections of each of the building included in the case studies.

For further information contact Anwar Jafri, Senior Research Officer, Research and Information Section, at 392-7185.